

### REMARKS

Claims 1-13, 22, 38-50 and 57-58 are pending in the application. Claims 1-3, 6-7, 9-11, 38, 41, 45, 50 and 57-58 have been amended. Submitted herewith is a request for a three-month extension of time. Also submitted herewith is a newly executed declaration by William Szczepaniak. Also submitted herewith are three date stamped return postcards showing receipt by the Office of the references cited in the Information Disclosure Statement submitted March 19, 2002. Submitted on September 9, 2004 under separate cover are two (2) boxes of foreign patent and non-patent literature references described herein.

The declaration of the present application was objected to as allegedly being defective because the signature for the full name of one of the inventors appeared unsigned. Applicants submitted a petition under 37 CFR 1.47(a) on September 17, 2001 showing that the non-signing inventor, William Szczepaniak, refused to join in the filing of the above-identified application. On November 19, 2001 Applicants received confirmation from the United States Patent and Trademark Office of the decision granting status under 37 CFR 1.47(a). A copy of the decision granting Rule 1.47(a) status is enclosed. Applicants also submit herewith a newly executed declaration signed by William Szczepaniak in compliance with 37 CFR 1.67(a)(2) and a power of attorney also executed by William Szczepaniak. Accordingly, Applicants submit that no additional fees are required for this submission.

The Information Disclosure Statement filed March 19, 2002 was objected to as allegedly being incomplete since it appeared to contain only a part of the documents cited in form PTO 1449. Applicants submit herewith copies of the three postcards accompanying the three boxes of references previously submitted with the Information Disclosure Statement filed March 19, 2002. Due to the voluminous number of references cited by Applicants, three boxes of references were submitted to the Office. Each box of references included a return postcard and a copy of the information disclosure statement clearly identifying a total of three boxes of references submitted with the Information Disclosure Statement. As shown on the enclosed copies of the return postcards, each box of references was received by the Office. Due to the voluminous number of cited references, Applicants have resubmitted copies of the foreign documents and non-patent literature references for the Examiner's review in two separate boxes under separate cover on

September 9, 2004. A copy of the transmittal form for each box of resubmitted documents, the date stamped return postcards of the previously submitted references, a copy of the previously submitted Information Disclosure Statement and a copy of the Resubmittal of References Cited in the Information Disclosure Correspondence mailed September 9, 2004 are enclosed. Due to the timely submission of a complete Information Disclosure Statement received by the Office, Applicants submit that no additional fees are required for this resubmission.

The specification has been objected to as requiring the correction of certain informalities, specifically the change of "SEQ ID No." to "SEQ ID NO." and the change of "SEQ ID Nos." to "SEQ ID NOs.". The specification has been amended throughout to comply with these requested changes. The specification has also been amended on page 21, amending "near 540" to "near 540 nm" as requested by the Examiner. The specification has also been amended on page 27 amending "EM" to "electromagnetic radiation", "UV" to "ultraviolet", and "IR" to "infrared" as requested by the Examiner. Claims 1-3 and 41 have been amended to recite "SEQ ID NO." and/or "SEQ ID NOs.", where appropriate, as requested by the Examiner. Claims 1, 3, 6-7, 9, 11, 38, 41, 45 and 57-58 have been amended to recite "nucleotide sequence" as requested by the Examiner.

35 U.S.C. 112, the second paragraph

Claims 1-13, 22, 38-50 and 57-58 allegedly stand rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as their invention.

Claim 1 has been amended to recite "or a green fluorescent protein encoded by a nucleic acid molecule of *Renilla reniformis* having at least 80% sequence identity thereto." Basis for the claim amendment can be found, for example, in Claim 1. Accordingly, no issue of new matter is presented.

Claim 3 has been amended to recite "a nucleotide sequence that hybridizes under high stringency having a percentage mismatch of 0.1 x SSPE, 0.1% SDS at 65° C to the nucleotide sequence of (a)". Basis for the claim amendment can be found, for example, on page 42 of the specification. Accordingly, no issue of new matter is presented.

Claim 10 has been amended to depend from claim 9 and to recite "the nucleic acid

comprising the cloning site”. Proper antecedent basis now exists for the recitation of “the plasmid of claim 9”. Claim 50 has also been amended to depend from claim 49. Proper basis now exists for the recitation “the cell of claim 49”.

35 U.S.C. 103

Claims 1-13, 22, 38-50 and 57-58 presently stand rejected under 35 USC 103(a) as allegedly being unpatentable over Bryan, B.J. et al., U.S. Patent No.6,232,107 (“the ‘107 Patent”). Claim 1 recites, *inter alia*, “an isolated nucleic acid molecule encoding a *Renilla reniformis* green fluorescent protein, comprising a nucleotide sequence that encodes the protein of SEQ ID NO. 27 or a green fluorescent protein encoded by a nucleic acid molecule of *Renilla reniformis*”. The Examiner asserts that the ‘107 Patent teaches an isolated *Renilla reniformis* polynucleotide comprising a coding sequence encoding a *Renilla reniformis* green fluorescent protein (GFP). As acknowledged by the Examiner on page 6, lines 7-8 of the Office Action dated March 9, 2004, “the polynucleotide sequence encoding the GFP protein sequence is not described in the Bryan et al. patent.” The Examiner submits that the encoded protein sequence reads on SEQ ID NO. 27 of the present application because the source and GFP are the same in the ‘107 Patent. Different polynucleotide sequences can each encode the same protein, however, each of the different polynucleotide sequences is distinct and expressed differently within cells. Accordingly, the polynucleotide sequence recited in claim 1 has a different functional property and different form of expression in cells from other polynucleotide sequences. Applicants submit that regardless of whether the same protein is disclosed in the ‘107 patent and the present application, the polynucleotide sequence recited in claim 1 of the present application is not obvious from the encoded protein of the ‘107 patent. Applicants submit that the ‘107 Patent does not disclose, teach or suggest the isolated nucleic acid molecule encoding a *Renilla reniformis* green fluorescent protein, comprising a nucleotide sequence that encodes the protein of SEQ ID NO. 27 or a green fluorescent protein encoded by a nucleic acid molecule of *Renilla reniformis* as recited in claim 1. Applicants submit that claim 1, and the claims that depend therefrom which assert additional features, are patentable over the cited references. Reconsideration and withdrawal of the rejection of claims 1-13, 22, 38-50 and 57-58 is requested.

Claims 1-13, 22, 38-50 and 57-58 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 5 of U.S. Patent No. 6,232,107. An obvious type double patenting rejection is proper when a claim in the in the application defines an invention that is merely an obvious variation of an invention claimed in the issued patent. Claim 1 of the present application recites "An isolated nucleic acid molecule encoding a *Renilla reniformis* green fluorescent protein, comprising a nucleotide sequence that encodes the protein of SEQ ID NO. 27 or a green fluorescent protein encoded by a nucleic acid molecule of *Renilla reniformis* having at least 80% sequence identity thereto." Claim 1 of the '107 Patent recites "An isolated nucleic acid fragment, comprising a sequence of nucleotides encoding *Renilla mulleri* luciferase, a *Gaussia* luciferase or a *Pleuromamma* luciferase, wherein the sequence of nucleotides is selected from the group consisting of a sequence of nucleotides set forth in SEQ ID No. 17, SEQ ID No. 19, or SEQ ID. No. 28; a sequence of nucleotides encoding the amino acid sequence set forth in SEQ ID No. 18, SEQ ID No. 20 or SEQ ID No. 29; or a sequence of nucleotides that hybridizes under high stringency to the sequence of nucleotides set forth in SEQ ID No. 17, SEQ ID No. 19 or SEQ ID No. 28." Claim 5 of the '107 patent recites "A plasmid, comprising the nucleic acid fragment of claim 1."

As acknowledged by the Examiner, claims 1-13, 22, 38-50 and 57-58 are not identical to the subject matter of U.S. Patent No. 6,232,107. Applicants further submit that claim 1 of the present application is not an obvious variation of the invention claimed in the '107 patent. Reconsideration and withdrawal of this rejection is requested.

In view of the foregoing remarks it is submitted that pending claims 1-13, 22, 38-50 and 57-58 are patentable over the references of record and, therefore, are in condition for allowance. Applicants respectfully request a timely Notice of Allowance be issued for the present application. In the event that any outstanding matters remain in connection with this application, the Examiner is invited to telephone the undersigned at (412) 263-4362 to discuss such matters.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read 'Lara A. Northrop', written in black ink.

Lara A. Northrop  
Reg. No. 55,502  
Pietragallo, Bosick & Gordon  
One Oxford Centre, 38<sup>th</sup> Floor  
301 Grant Street  
Pittsburgh, PA 15219  
Attorney for Applicant(s)

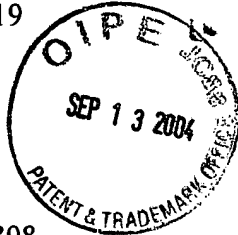
Telephone: 412-263-4362



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ROBERT S. KLEMZ  
ONE OXFORD CENTRE, 38TH FLOOR  
301 GRANT STREET  
PITTSBURGH, PA 15219



In re Application of  
Bruce Bryan et al.  
Application No. 09/808,898  
Filed: March 15, 2001  
For: RENILLA RENIFORMIS  
FLUORESCENT PROTEINS, NUCLEIC  
ACIDS ENCODING THE FLUORESCENT  
PROTEINS AND THE USE THEREOF IN  
DIAGNOSTICS, HIGH THROUGHPUT  
SCREENING AND NOVELTY ITEMS

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OFFICE OF PETITIONS

:  
:  
: DECISION GRANTING  
: STATUS UNDER 37 CFR 1.47(a)  
:  
:

This is in response to the petition under 37 CFR 1.47(a), filed September 17, 2001.

The petition is granted.

Petitioner has shown that the non-signing inventor has refused to join in the filing of the above-identified application.

The above-identified application and papers have been reviewed and found in compliance with 37 CFR 1.47(a). This application is hereby accorded Rule 1.47(a) status. As provided in Rule 1.47(c), this Office will forward notice of this application's filing to the non-signing inventor at the address given in the petition. Notice of the filing of this application will also be published in the Official Gazette.

Telephone inquiries regarding this decision should be directed to Irvin Dingle at (703) 306-5684.

This application is being forwarded to the Initial Patent Examination Unit.

Frances Hicks

Lead Petitions Examiner  
Office of Petitions  
Office of the Deputy Commissioner  
for Patent Examination Policy



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that the accompanying paper was filed.

Applicant(s) Bruce Bryan et al.

Serial No. 09/808,898

Atty's File No. LUME 48487

Paper Dated 09/09/2004

LAN:hh

- Transmittal Form
- Resubmittal Of References For  
IDS Transmittal Letter
- Copy Of Previously Submitted  
IDS
- Copies Of Previously Submitted  
References (BOX 1 OF 2)
- Copies Of Date Stamped Return  
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Submitted IDS & References



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## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	09/808,898
Filing Date	03/15/2001
First Named Inventor	Bruce Bryan
Art Unit	1653
Examiner Name	Samuel W. Liu
Attorney Docket Number	LUME 48487

### ENCLOSURES (Check all that apply)

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Fee Transmittal Form<br><input type="checkbox"/> Fee Attached<br><input type="checkbox"/> Amendment/Reply<br><input type="checkbox"/> After Final<br><input type="checkbox"/> Affidavits/declaration(s)<br><input type="checkbox"/> Extension of Time Request<br><input type="checkbox"/> Express Abandonment Request<br><input type="checkbox"/> Information Disclosure Statement<br><input type="checkbox"/> Certified Copy of Priority Document(s)<br><input type="checkbox"/> Response to Missing Parts/Incomplete Application<br><input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Drawing(s)<br><input type="checkbox"/> Licensing-related Papers<br><input type="checkbox"/> Petition<br><input type="checkbox"/> Petition to Convert to a Provisional Application<br><input type="checkbox"/> Power of Attorney, Revocation<br>Change of Correspondence Address<br><input type="checkbox"/> Terminal Disclaimer<br><input type="checkbox"/> Request for Refund<br><input type="checkbox"/> CD, Number of CD(s) _____<br><div>Remarks</div> | <input type="checkbox"/> After Allowance communication to Technology Center (TC)<br><input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences<br><input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)<br><input type="checkbox"/> Proprietary Information<br><input type="checkbox"/> Status Letter<br><input checked="" type="checkbox"/> Other Enclosure(s) (please Identify below): <ul style="list-style-type: none"><li>- Resubmittal Of References For IDS Transmittal Letter</li><li>- Copy Of Previously Submitted IDS</li></ul><br><ul style="list-style-type: none"><li>- Copies Of Previously Submitted References (Box 1 of 2)</li><li>- Copies Of Date Stamped Return Postcards For Previously Submitted IDS &amp; References</li><li>- Return Postcard</li></ul> |
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### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Lara A. Northrop Pietragallo, Bosick & Gordon
Signature	
Date	09/09/2004

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Typed or printed name	Lara A. Northrop		
Signature		Date	09/09/2004

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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 09/808,898 Confirmation No. 4894  
Applicant : Bruce Bryan et al.  
Filed : 03/15/2001  
Title : RENILLA RENIFORMIS FLUORESCENT PROTEINS,  
NUCEIC ACIDS ENCODING THE FLUORESCENT PROTEINS  
AND THE USE THEREOF IN DIAGNOSTICS  
TC/A.U. : 1653  
Examiner : Samuel W. Liu  
Docket No. : LUME 48487  
Customer No. : 29694

### **RESUBMITTAL OF REFERENCES FOR INFORMATION DISCLOSURE STATEMENT**

September 9, 2004

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to the provisions of 37 CFR Sections 1.56, 1.97 and 1.98, Applicants herewith resubmit copies of the foreign and non-patent literature references cited on the attached Forms PTO/SB/08A and Forms PTO/SB/08B for consideration during prosecution of this application.

These references were previously submitted in an Information Disclosure Statement dated March 19, 2002. Due to the voluminous number of references cited, two (2) boxes of references are herewith resubmitted under separate cover as referenced in Applicants' response to Office Action dated September 9, 2004. Box 1 of 2 contains all foreign documents and non-patent literature references listed on pages 1-9 of 20 of previously submitted PTO/SB/08A and PTO/SB/08B. Box 2 of 2 contains all foreign documents and non-patent literature references listed on pages 10-20 of 20 of previously submitted PTO/SB/08A and PTO/SB/08B.

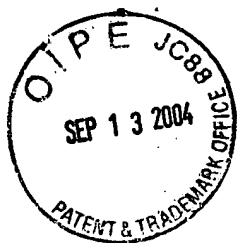
Applicants submit that these references were timely filed with the Information Disclosure Statement filed March 19, 2002 as evidenced by the copies of the enclosed return postcards date stamped by the Patent and Trademark Office on March 19, 2002. Applicants have resubmitted these references at the request of the Examiner and submit no additional fee is necessary for this resubmittal.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Lara Northrop".

Lara A. Northrop  
Registration No. 55,502  
Pietragallo, Bosick & Gordon  
One Oxford Centre, 38<sup>th</sup> Floor  
301 Grant Street  
Pittsburgh, PA 15219  
Attorney for Applicants

(412) 263-4362



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Applicant(s) Bruce Bryan et al.

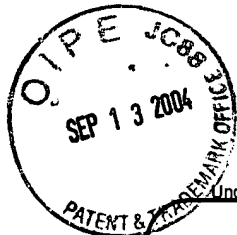
Serial No. 09/808,898

Atty's File No. LUME 48487

Paper Dated 09/09/2004

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<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	09/808,898
	Filing Date	03/15/2001
	First Named Inventor	Bruce Bryan
	Art Unit	1653
	Examiner Name	Samuel W. Liu
Total Number of Pages in This Submission	Attorney Docket Number	LUME 48487

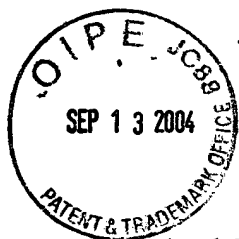
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Firm or Individual name	Lara A. Northrop Pietragallo, Bosick & Gordon
Signature	
Date	09/09/2004

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Typed or printed name	Lara A. Northrop
Signature	
Date	09/09/2004

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TC/A.U. : 1653  
Examiner : Samuel W. Liu  
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Customer No. : 29694

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September 9, 2004

Commissioner for Patents  
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Alexandria, VA 22313-1450

Sir:

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Respectfully submitted,

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Lara A. Northrop  
Registration No. 55,502  
Pietragallo, Bosick & Gordon  
One Oxford Centre, 38<sup>th</sup> Floor  
301 Grant Street  
Pittsburgh, PA 15219  
Attorney for Applicants

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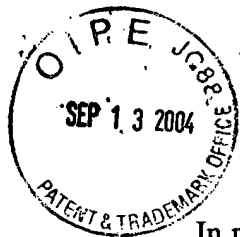
<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	<b>Application Number</b>	09/808,898
	<b>Filing Date</b>	03/15/2001
	<b>First Named Inventor</b>	Bruce Bryan
	<b>Group Art Unit</b>	1642
	<b>Examiner Name</b>	
<b>Total Number of Pages in This Submission</b>		<b>Attorney Docket Number</b> 24729-128

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<b>Remarks</b>		

<b>SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT</b>	
Firm or Individual name	Alan G. Towner Pietragallo, Bosick & Gordon
Signature	
Date	03/13/2002

<b>CERTIFICATE OF MAILING</b>			
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Typed or printed name	Alan G. Towner		
Signature		Date	03/13/2002

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In re Application of:

BRUCE BRYAN ET AL.

Serial No.: 09/808,898

Filed: March 15, 2001

Group Art Unit: 1642

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:  
: RENILLA RENIFORMIS  
: FLUORESCENT PROTEINS,  
: NUCEIC ACIDS ENCODING THE  
: FLUORESCENT PROTEINS AND THE  
: USE THEREOF IN DIAGNOSTICS  
:  
: Attorney Docket No. 24729-128

**INFORMATION DISCLOSURE STATEMENT**

March 13, 2002

Assistant Commissioner for Patents  
Washington, D.C. 20231

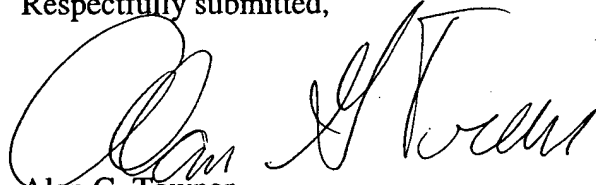
Sir:

Pursuant to the provisions of 37 CFR Sections 1.56, 1.97 and 1.98, Applicants submit herewith copies of the references cited on the attached Forms PTO/SB/08A and Forms PTO/SB/08B for consideration during prosecution of this application. The cited documents are provided in five groups: (1) art that may be related to isolation/cloning of GFP or luciferase proteins and genes; (2) art that may be related to uses of GFP or luciferase; (3) art that may be related to items/procedures that use chemiluminescence; (4) art that may be related to novelty items which use chemiluminescence or bioluminescence; and (5) art that may be related to items/procedures that do not use chemiluminescence or bioluminescence.



This Statement is filed solely for the purpose of complying with the pertinent rules of the Office and is not intended to be a substitute for an independent evaluation by the Examiner of the art cited or an independent search by the Examiner, and no representation of any nature is made or intended by the filing of this Statement.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Alan G. Towner", written in a cursive style.

Alan G. Towner

Registration No. 32,949

Pietragallo, Bosick & Gordon

One Oxford Centre, 38<sup>th</sup> Floor

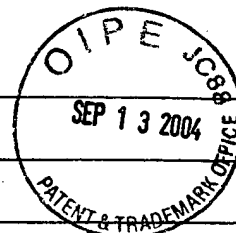
301 Grant Street

Pittsburgh, PA 15219

Attorney for Applicant

(412) 263-4340

FORM PTO-1449 (Modified)	ATTY. DOCKET NO. 24729-0128	SERIAL NO. 09/808,898
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT		
	APPLICANT BRYAN et al.	
	FILING DATE March 15, 2001	GROUP 1642



1) Art that concerns isolation/cloning of GFP, or Luciferase proteins and genes.

#### U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER							DATE	NAME	CLAS S	SUB CLAS S	FILING DATE
1	A	4	5	8	1	3	3	5	4/8/86	Baldwin	435	172.3	12/1/82
1	B	4	9	6	8	6	1	3	11/6/90	Masuda et al.	435	172.3	07/26/88
1	C	5	0	9	3	2	4	0	3/3/92	Inouye et al.	435	69.1	10/8/87
1	D	5	0	9	8	8	2	8	3/24/92	Geiger et al.	435	7.72	10/24/86
1	E	5	1	3	9	9	3	7	8/18/92	Inouye et al.	435	69.1	11/18/88
1	F	5	1	6	2	2	2	7	11/10/92	Cormier	435	252.33	03/17/88
1	G	5	1	8	2	2	0	2	1/26/93	Kajiyama et al.	435	189	8/5/91
1	H	5	1	9	6	5	2	4	3/23/93	Gustafson et al.	536	23.2	01/06/89
1	I	5	2	1	9	7	3	7	6/15/93	Kajiyama et al.	435	69.1	3/26/91
1	J	5	2	2	9	2	8	5	7/20/93	Kajiyama et al.	435	189	6/23/92
1	K	5	2	9	2	6	5	8	3/8/94	Cormier et al.	435	252.33	6/17/93
1	L	5	3	3	0	9	0	6	7/19/94	Kajiyama et al.	435	189	06/15/93
1	M	5	3	5	2	5	9	8	10/4/94	Kajiyama et al.	435	189	8/29/91
1	N	5	3	6	0	7	2	8	11/1/94	Prasher	435	189	12/1/92
1	O	5	4	1	8	1	5	5	05/23/95	Cormier et al.	435	189	12/14/93
1	P	5	4	2	2	2	6	6	06/6/95	Cormier et al.	435	252.3	10/9/92
1	Q	5	6	0	4	1	2	3	02/18/97	Kazami et al.	435	189	06/15/94
1	R	5	6	2	5	0	4	8	4/29/97	Tsien et al.	536	23.4	11/10/94
1	S	5	7	4	1	6	6	8	04/21/98	Ward et al.	435	69.1	05/26/95
1	T	5	7	7	7	0	7	9	07/07/98	Tsien et al.	530	350	11/20/96
1	U	5	8	0	4	3	8	7	09/08/98	Cormack et al.	435	6	01/31/97
1	V	5	8	7	4	3	0	4	02/23/99	Zolotukhin et al.	435	366	01/18/96

#### FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER							DATE	COUNTRY	CLAS S	SUB CLAS S	Translation Yes No	
1	W	0	2	2	6	9	7	9	7/1/87	EP A2				
1	X	0	3	8	7	3	5	5	9/19/90	EP A1				
1	Y	0	5	4	0	0	6	4	5/5/93	EP A1				
1	Z	3	0	3	0	6	7	8	2/8/91	JP				X*
1	AA	4	2	5	8	2	8	8	09/14/92	JP				X*
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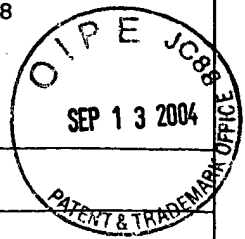
#### EXAMINER

#### DATE CONSIDERED

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LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT													
										APPLICANT BRYAN et al.			
										FILING DATE March 15, 2001		GROUP 1642	
1	AD	8	7	0	3	3	0	4	6/4/87	PCT			
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1	AF	9	2	1	5	6	7	3	09/17/92	PCT			
1	AG	9	5	0	7	4	6	3	3/16/95	PCT			
1	AH	9	5	1	8	8	5	3	07/13/95	PCT			
1	AI	9	5	2	1	1	9	1	8/10/95	PCT			
1	AJ	9	5	2	5	7	9	8	9/28/95	PCT			
1	AK	9	6	2	3	8	1	0	08/08/96	PCT			
1	AL	9	6	2	7	6	7	5	09/12/96	PCT			
1	AM	9	7	2	6	3	3	3	07/24/97	OCT			
1	AN	9	9	4	9	0	1	9	09/30/99	PCT			



OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)			
1	AO	Baldwin <i>et al.</i> , Active Center Studies on Bacterial Luciferase: Modification of the Enzyme with 2,4-Dinitrofluorobenzene, <i>Biochemistry</i> 20:512-517 (1981).	
1	AP	Baldwin <i>et al.</i> , Cloning of the luciferase structural genes from <i>Vibrio harveyi</i> and expression of bioluminescence in <i>Escherichia coli</i> , <i>Biochemistry</i> 23: 3663-3667 (1984)	
1	AQ	Belas <i>et al.</i> , Bacterial bioluminescence: Isolation and expression of the luciferase genes from <i>Vibrio harveyi</i> , <i>Science</i> 218: 791-793 (1982)	
1	AR	Blinks <i>et al.</i> , Multiple forms of the calcium-sensitive bioluminescent protein aequorin, <i>Fed. Proc.</i> 1435: 474 (1975)	
1	AS	Casper <i>et al.</i> Expression of the green fluorescent protein-encoding gene from a tobacco mosaic virus-based vector <i>Gene</i> 173: 69-73 (1996)	
1	AT	Chalfie, Green fluorescent protein, <i>Photochemistry and Photobiology</i> , 62(4):651-656 (1995)	
1	AU	Charbonneau <i>et al.</i> , "Amino acid sequence of the calcium-dependent photoprotein aequorin," <i>Biochem.</i> 24:6762-6771 (1985)	
1	AV	Chemical Abstract #115(5)43510b (citing, Japanese Patent Application No. JP 3-30678 Osaka)	
1	AW	Cohn <i>et al.</i> , Nucleotide Sequence of the <i>luxA</i> Gene of <i>Vibrio harveyi</i> and the Complete Amino Acid Sequence of the-Subunit of Bacterial Luciferase, <i>J. Biol. Chem.</i> , 260(10): 6139-6146; (1985)	
1	AX	Cohn <i>et al.</i> "Cloning of the <i>Vibrio harveyi</i> luciferase genes: use of a synthetic oligonucleotide probe", <i>Proc. Natl. Acad. Sci. U.S.A.</i> 80(1):102-123 (1983)	
1	AY	Database Derwent # 007778737 WPI Acc. No. 89-043849/198906 (citing, Japanese Patent Application No. JP 63317079, published December 26, 1988)	
1	AZ	Database Derwent #008196500 (citing WO 9001542, Recombinant luciferase, fragments from it, and gene coding for it - the luciferase having increased stability and quantum yield)	
1	BA	Database Derwent #010423635 WPI Acc. No. 95-324955/199542 (citing, Japanese Patent Application No. JP 7222590, published August 22, 1995)	
1	BB	Database Derwent #008580311 WPI Acc. No. 91-084343/199112 (citing, Japanese Patent Application No. JP 3030678 published February 8, 1991)	
1	BC	Database EMBL Nucleotide and Protein Sequences, AC=AF025844, Co-reporter vector pRL-Null, complete sequence, abstract, (1997)	
1	BD	Database Derwent #009227258 WPI Acc. No. 92-354680/199243 (citing, Japanese Patent Application No. JP 4258288, published September 14, 1993)	
1	BE	de Wet <i>et al.</i> , "Cloning and expression of the firefly luciferase gene in mammalian cells," <i>Bioluminescence and Chemiluminescence. Basic Chemistry and Analytical Applications</i> ,	

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LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT			
		APPLICANT BRYAN <i>et al.</i>	
		FILING DATE March 15, 2001	GROUP 1642


		DeLuca <i>et al.</i> , eds., pp. 368-371, Academic Press (1981)
1	BF	de Wet <i>et al.</i> , "Cloning firefly luciferase," <i>Meth. Enzymol.</i> 133:3-14 (1986)
1	BG	de Wet <i>et al.</i> , "Cloning of firefly luciferase cDNA and the expression of active luciferase in <i>Escherichia coli</i> ," <i>Proc. Natl. Acad. Sci. USA</i> 82:7870-7873 (1985)
1	BH	Delagrave <i>et al.</i> , Red-shifted excitation mutants of the green fluorescent protein, <i>Bio/Technology</i> 13(2):151-154 (1995)
1	BI	Ehrig <i>et al.</i> , Green-fluorescent protein mutants with altered fluorescence excitation spectra, <i>FEBS Letters</i> 367:163-166 (1995)
1	BJ	Engbrecht <i>et al.</i> , "Techniques for cloning and analyzing bioluminescence genes from marine bacteria," <i>Meth. Enzymol.</i> 133:83-99, 234 (1986)
1	BK	Engbrecht <i>et al.</i> , Bacterial bioluminescence: Isolation and genetic analysis of functions from <i>Vibrio fischeri</i> , <i>Cell</i> 32: 773-781 (1983)
1	BL	Engbrecht <i>et al.</i> , Identification of genes and gene products necessary for bacterial bioluminescence, <i>Proc. Natl. Acad. Sci. USA</i> 81: 4154-4158 (1984)
1	BM	Frackman <i>et al.</i> , "Cloning, organization, and expression of the bioluminescence genes of <i>Xenorhabdus luminescens</i> ," <i>J. Bacteriol.</i> 172(10):5767-5773 (1990)
1	BN	Gast <i>et al.</i> , Separation of a blue fluorescence protein from bacterial luciferase. <i>Biochem. Biophys. Res. Commun.</i> 80(1): 14-21 (1978)
1	BO	Goto <i>et al.</i> , Preliminary report on the pink-colored <i>Cypridina</i> luciferase, a natural model of the luciferin-luciferase complex, in <i>Bioluminescence and Chemiluminescence. Basic Chemistry and Analytical Applications</i> , DeLuca <i>et al.</i> , eds., pp. 203-207, Academic Press (1981)
1	BP	Hastings <i>et al.</i> , The Red Absorbing Flavin Species in the Reaction of Bacterial Luciferase with FMNH <sub>2</sub> and O <sub>2</sub> , <i>Bioluminescence and Chemiluminescence</i> pp. 403-408 (1981).
1	BQ	Hastings <i>et al.</i> , Fluorescence Properties of Luciferase Peroxyflavins Prepared with ISO-FMN and 2-THIO FMN <sup>1</sup> , <i>Bioluminescence and Chemiluminescence</i> pp. 97-102 (1981).
1	BR	Hastings, Bioluminescence, in <i>Cell Physiol.: Source Book</i> , Sperelakis, ed., pp. 665-681, Academic Press (1995)
1	BS	Hill <i>et al.</i> , <i>Bioluminescence and Chemiluminescence. Basic Chemistry and Analytical Applications</i> , DeLuca <i>et al.</i> , eds., pp. 396-399, Academic Press (1981)
1	BT	Hori <i>et al.</i> , Structure of native <i>Renilla reniformis</i> luciferin, <i>Proc. Natl. Acad. Sci. USA</i> 74: 4285-4287 (1977).
1	BU	Illarionov <i>et al.</i> , Sequence of the cDNA encoding the Ca <sup>2+</sup> -activated photoprotein obelin from the hydroid poly <i>Obelia longissima</i> , <i>Gene</i> 153:273-274 (1995)
1	BV	Inouye <i>et al.</i> , "Overexpression and purification of the recombinant Ca <sup>2+</sup> -binding protein, apoaequorin," <i>J. Biochem.</i> 105(3):473-477 (1989).
1	BW	Inouye <i>et al.</i> , Cloning and sequence analysis of cDNA for the luminescent protein aequorin, <i>Proc. Natl. Acad. Sci. USA</i> 82:3154-3158 (1985).
1	BX	Inouye <i>et al.</i> , Squid bioluminescence II. Isolation from <i>Watasenia scintillans</i> and synthesis of 2-(p-hydroxybenzyl)-6-(p-hydroxyphenyl)-3,7-dihydroimidazo[1,2-a]pyrazin-3-one, <i>Jap. Soc. Chem. Lett.</i> pp. 141-144 (1975).
1	BY	Inouye <i>et al.</i> , Expression of Apoaequorin Complementary DNA in <i>Escherichia coli</i> , <i>Biochemistry</i> 25:8425-8429 (1986).
1	BZ	Johnson <i>et al.</i> , Introduction to the <i>Cypridina</i> system, <i>Methods in Enzymology. Bioluminescence and Chemiluminescence.</i> 57:331-349 (1978).
1	CA	Johnson, <i>Luminescence, Narcosis, and Life in the Deep Sea</i> , pp. 50-56, Vantage Press
1	CB	Johnson <i>et al.</i> , "Compartmentalization of algal bioluminescence: autofluorescence of bioluminescent particles in the dinoflagellate <i>Gonyolax</i> as studied with image-intensified video microscopy and flow cytometry", <i>J. Cell. Biol.</i> 100(5):1435-1446 (1985)

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LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT			
		APPLICANT BRYAN et al.	
		FILING DATE March 15, 2001	GROUP 1642

1	CC	Karatani et al., A blue fluorescent protein from a yellow-emitting luminous bacterium, <u>Photochem. Photobiol.</u> 55(2): 293-299 (1992)
1	CD	Kohama et al., Molecular weight of the photoprotein aequorin, <u>Biochemistry</u> 10: 4149-4152 (1971)
1	CE	Kurose et al., Bioluminescence of the Ca <sup>2+</sup> -binding photoprotein aequorin after cysteine modification, <u>Proc. Natl. Acad. Sci. USA</u> 86(1): 80-84 (1989)
1	CF	Lee et al., "Purification of a Blue-fluorescent Protein from the Bioluminescent Bacterium <i>Photobacterium phosphoreum</i> ," <u>Methods Enzymol.</u> , (Biolumin. Chemilumin.), 57:226-234 (1978)
1	CG	Lorenz et al., Isolation and expression of a cDNA encoding <i>Renilla reniformis</i> luciferase, <u>Proc. Natl. Acad. Sci. USA</u> 88: 4438-4442 (1991)
1	CH	Matthews et al., Purification and properties of <i>Renilla reniformis</i> luciferase, <u>Biochemistry</u> , 16: 85-91 (1977)
1	CI	Matz et al., "Fluorescent proteins from nonbioluminescent Anthozoa species", <u>Nature Biotechnol.</u> , 17:969-973; (1999)
1	CJ	McElroy et al., The colors of bioluminescence: Role of enzyme and substrate structure, in <u>Molecular Architecture in Cell Physiology</u> , pp. 63-80, Hayashi et al., eds., Prentice-Hall, Inc., Englewood Cliffs, NJ (1966)
1	CK	Miyamoto et al., Cloning and expression of the genes from the bioluminescent system of marine bacteria, <u>Meth. Enzymol.</u> 133:70-81 (1986)
1	CL	Morise et al., Intermolecular Energy Transfer in the Bioluminescent System of <i>Aequorea</i> <u>Biochemistry</u> 13:2656-2662 (1974)
1	CM	Ormo et al. Crystal Structure of the <i>Aequorea victoria</i> Green Fluorescent Protein <u>Science</u> 273:1392-1395 (1996)
1	CN	Prasher et al., Cloning and expression of the cDNA coding for aequorin, a bioluminescent calcium-binding protein, <u>Biochem. Biophys. Res. Commun.</u> 126(3):1259-1268 (1985)
1	CO	Prasher et al., Bioluminescence and Chemiluminescence. <u>Basic Chemistry and Analytical Applications</u> , DeLuca et al., eds., pp. 365-367, Academic Press (1981)
1	CP	Prasher et al., Isolation and expression of a cDNA coding for aequorin, the Ca <sup>2+</sup> -activated photoprotein from <i>Aequorea victoria</i> , <u>Meth. Enzymol.</u> 133:288-297 (1986)
1	CQ	Prasher et al., Sequence comparisons of complementary DNAs encoding aequorin isotypes, <u>Biochem.</u> 26:1326-1332 (1987)
1	CR	Prasher et al., Primary structure of the <i>Aequorea victoria</i> green-fluorescent protein, <u>Gene</u> 111:229-233 (1992)
1	CS	Prendergast et al., "Chemical and Physical Properties of Aequorin and the Green Fluorescent Protein Isolated from <i>Aequorea forskalea</i> ", <u>Biochem.</u> , 17: 3448-3453; (1978)
1	CT	Sandalova, Some notions about structure of bacterial luciferase, obtained by analysis of amino acid sequence, and study of monoclonal antibodies binding, In <i>Biological Luminescence, Proceedings of International School</i> , 1st, ed., Jezowska-Trzebiatowska et al., World Science (1990)
1	CU	SeaLite Sciences Technical Report No. 3, "The Recombinant Photoprotein, AquaLite™", SeaLite Sciences, Inc., pages 1-6; (1994)
1	CV	Sherf et al., Dual-luciferase reporter assay: an advanced co-reporter technology integrating firefly and <i>Renilla</i> luciferase assays, <u>Promega Notes</u> 57:2-5 (1996)
1	CW	Shimomura et al., Semi-synthetic aequorin. An improved tool for the measurement of calcium ion concentration, <u>Biochem. J.</u> 251(2): 405-10 (1988)
1	CX	Shimomura et al. Structure of Light-Emitting Moiety of Aequorin <u>Biochemistry</u> 11:1602-1608 (1972)

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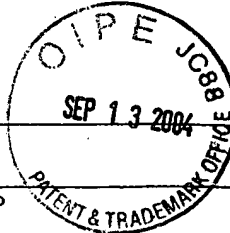
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APPLICANT BRYAN et al.			
FILING DATE March 15, 2001	GROUP 1642		
1	CY	Shimomura et al., Recombinant aequorin and recombinant semi-synthetic aequorins. Cellular Ca <sup>2+</sup> ion indicators, <u>Biochem. J.</u> 270(2): 309-12 (1990)	
1	CZ	Shimomura et al. The Structure of <i>Latia</i> Luciferin <u>Biochemistry</u> 7:1734-1738 (1968)	
1	DA	Shimomura, Structure of the Chromophore of Aequorea Green Fluorescent Protein <u>FEBS Letters</u> 104:220-222 (1979)	
1	DB	Shimomura et al., Extraction, purification and properties of a aequorin, a bioluminescent protein from the luminous hydromedusan, <i>Aequorea</i> , <u>J. Cell. Comp. Physiol.</u> 59: 223-238 (1962)	
1	DC	Shimomura et al., Properties and reaction mechanism of the bioluminescence system of the deep-sea shrimp <i>Oplophorus graciliorostris</i> , <u>Biochem</u> 17(6): 994-998 (1978)	
1	DD	Shimomura et al., Properties of the bioluminescent protein aequorin, <u>Biochemistry</u> 8: 3991-3997 (1969)	
1	DE	Shimomura et al. Reactions Involved in Bioluminescence of Limpet ( <i>Latia neritoides</i> ) and Luminous Bacteria <u>Proc. Natl. Acad. Sci. U.S.A.</u> 69:2086-2089 (1972)	
1	DF	Spurlok et al., A fine structure study of the anthocodium in <i>Renilla mulleri</i> , <u>J. of Cell Biology</u> 64:15-28 (1975)	
1	DG	Thompson et al., Cloning and expression of cDNA for the luciferase from the marine ostracod <i>Vargula hilgendorfi</i> xi, <u>Proc. Natl. Acad. Sci. USA</u> 86: 6567-6571 (1989)	
1	DH	Tsien, The Green Fluorescent Protein <u>Annu. Rev. Biochem.</u> 67:509-544 (1998)	
1	DI	Tsuji et al., Some properties of luciferase from the bioluminescent crustacean, <i>Cypridina hilgendorfi</i> , <u>Biochem.</u> 13(25):5204-5209 (1974)	
1	DJ	Tsuji, "Cypridina luciferin and luciferase", <u>Meth. Enzymol.</u> 57:364-372; (1978)	
1	DK	Tsuji et al., Site-specific mutagenesis of the calcium-binding photoprotein aequorin, <u>Proc. Natl. Acad. Sci. USA</u> 83:8107-8111 (1986)	
1	DL	Wampler et al. Similarities in the Bioluminescence from the Pennatulacea <u>Biochimica et Biophysica Acta</u> 314:104-109 (1973).	
1	DM	Ward et al., Energy Transfer Via Protein-Protein Interaction in <i>Renilla</i> Bioluminescence, <u>Photochemistry and Photobiology</u> 27:389-396 (1978).	
1	DN	Ward et al., Sequence and Chemical Structure of the Hexapeptide Chromophore of Aequorea Green-Fluorescent Protein, <u>Photochemistry and Photobiology</u> 49:62S (1989)	
1	DO	Ward et al., Extraction of <i>Renilla</i> -type luciferin from the calcium-activated photoproteins aequorin, mnemiopsin, and berovin, <u>Proc. Natl. Acad. Sci. USA</u> 72: 2530-2534 (1975)	

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Sheet 00120

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FILING DATE March 15, 2001		

2) Art that concerns uses of GFP, or Luciferase.

U.S. PATENT DOCUMENTS													
EXAMINER INITIAL		DOCUMENT NUMBER							DATE	NAME	CLAS S	SUB CLAS S	FILING DATE
2	DP	4	8	6	1	7	0	9	8/29/89	Ulitzur et al.	435	6	5/31/85
2	DQ	5	1	9	6	3	1	8	3/23/93	Baldwin et al.	435	69.1	06/26/90
2	DR	5	2	2	1	6	2	3	6/22/93	Legocki et al.	435	252.3	7/19/89
2	DS	5	2	4	6	8	3	4	9/21/93	Tsuji et al.	435	7.91	2/19/92
2	DT	5	4	9	1	0	8	4	02/13/96	Chalfie et al.	435	189	09/10/93
2	DU	5	7	7	6	8	1	6	07/07/98	Virta et al.	435	6	09/15/95
2	DV	5	8	9	1	6	4	6	04/06/99	Barak et al.	435	7.2	06/05/97
2	DW	5	9	1	2	1	3	7	06/15/99	Tsien et al.	435	15	07/16/96

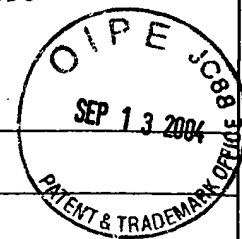
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2	EA	2	2	8	8	2	3	2	10/11/95	UK			
2	EB	3	9	3	5	9	7	4	5/2/91	DE A1			X*
2	EC	5	0	6	4	5	8	3	3/19/93	JP			X*
2	ED	9	6	0	7	1	0	0	03/07/96	PCT			
2	EE	9	7	1	1	0	9	4	03/27/97	PCT	--	--	
2	EF	9	7	2	8	2	6	1	08/07/97	PCT	--	--	
2	EG	9	7	4	1	2	2	8	11/06/97	PCT			
2	EH	9	8	0	2	5	7	1	01/22/98	PCT	--	--	
2	EI	9	8	1	4	6	0	5	04/09/98	PCT	--	--	
2	EJ	9	8	2	6	2	7	7	6/18/98	PCT	G01N	21/76	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)													
2	EK	"AquaLite®. A calcium-triggered photoprotein," SeaLite Sciences Technical Report No. 3 (1994)											
2	EL	Amsterdam, et al. The Aequorea victoria Green Fluorescent Protein Can Be Used as a Reporter in Live Zebrafish Embryos Developmental Biology 171:123-129 (1995)											
2	EM	Anctil et al., Mechanism of photoinactivation and re-activation in the bioluminescence system of the ctenophore Mnemiopsis, Biochem. J. 22(1): 269-272 (1984)											
2	EN	Badminton et al., nucleoplasmin-targeted aequorin provides evidence for a nuclear calcium barrier, Expt. Cell Research 216(1): 236-243 (1995)											
2	EO	Baldwin et al., "Applications of the cloned bacterial luciferase genes LUXA and LUXB to the study of transcriptional promoters and terminators," Bioluminescence and Chemiluminescence: Basic Chemistry and Analytical Applications, DeLuca and McElroy, Eds., Academic Press (1981)											
2	EP	Becvar et al., A thermodynamic explanation for the kinetic differences observed using different											

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LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT			
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		FILING DATE March 15, 2001	GROUP 1642



		chain length aldehydes in the <i>in vitro</i> bacterial bioluminescent reaction, in <u>Bioluminescence and Chemiluminescence</u> , pp. 147-55, 180-85, Proc. of the IV Int. Bioluminescence and Chemiluminescence Symp., Freiburg, September 1986
2	EQ	Button et al., Aequorin-expressing mammalian cell lines used to report Ca <sup>2+</sup> mobilization, <u>Cell Calcium</u> 14(9):663-671 (1993)
2	ER	Chalfie et al. Green Fluorescent Protein as a marker for Gene Expression <u>Science</u> 263: 802-805 (1994)
2	ES	Charbonneau et al. Ca <sup>2+</sup> -induced Bioluminescence in <i>Renilla reniformis</i> Purification and Characterization of a Calcium-Triggered Luciferin-Binding Protein <u>J. Biol. Chem.</u> 254:769-780 (1979)
2	ET	Cody et al. Chemical Structure of the Hexapeptide Chromophore of the Aequorea Green-Fluorescent Protein <u>Biochemistry</u> 32:1212-1218 (1993)
2	EU	Cormack et al. Yeast-enhanced green fluorescent protein (yEGFP): a reporter of gene expression in <i>Candida albicans</i> <u>Microbiology</u> 143:303-311 (1997)
2	EV	Cormier et al., Evidence for similar biochemical requirements for bioluminescence among the coelenterates, <u>J. Cell Physiol.</u> 81: 291-298 (1972)
2	EW	Cormier "Renilla and Aequorea bioluminescence" pp 225-233 in <u>Bioluminescence and Chemiluminescence. Basic Chemistry and Analytical Applications.</u> DeLuca et al eds, Academic Press 1981.
2	EX	Dabiri et al. Myofibrillogenesis visualized in living embryonic cardiomyocytes <u>Pro. Natl. Acad. Sci. USA</u> 94:9493-9498 (1997)
2	EY	Database Derwent #009443237 WPI Acc. No. 93-136754/199317 (citing Japanese Patent Application No. JP 5064583, published March 19, 1993)
2	EZ	Fey et al. Green Fluorescent protein production in the cellular slime molds <i>Polysphondylium pallidum</i> and <i>Dictyostelium discoideum</i> <u>Gene</u> 165:127-130 (1995)
2	FA	Fratamico et al., Construction and characterization of <i>Escherichia coli</i> 0157:H7 strains expressing firefly luciferase and green fluorescent protein and their use in survival studies, <u>J of Food Protection</u> 60(10):1167-1173 (1997)
2	FB	Giuliano et al. Fluorescent-protein biosensors: new tools for drug discovery <u>TiBech</u> 16: 135-140 (1998)
2	FC	Grentzmann et al., A dual-luciferase system for studying recoding signals, <u>RNA</u> 479-486 (1998)
2	FD	Hart et al. "Renilla reniformis bioluminescence: Luciferase-catalyzed production of nonradiating excited states from luciferin analogues and elucidation of the excited state species involved in energy transfer to Renilla green fluorescent protein", (1979) <u>Biochemistry</u> 18:2204-2210 (1979)
2	FE	Heim et al., Engineering green fluorescent protein for improved brightness, longer wavelengths and fluorescence resonance energy transfer, <u>Current Biology</u> 6(2):178-182 (1996)
2	FF	Heinlein et al. Interaction of Tobamovirus Movement Proteins with the Plant Cytoskeleton <u>Science</u> 270:1983-1985 (1995)
2	FG	Hori et al., Renilla luciferin as the substrate for calcium induced photoprotein bioluminescence. Assignment of luciferin plutomers in aequorin and mnemiopsin, <u>Biochemistry</u> 14: 2371-2376, (1975).
2	FH	Ikawa et al. A rapid and non-invasive selection of transgenic embryos before implantation using green fluorescent protein (GFP) <u>FEBS Letters</u> 375:125-128 (1995)
2	FI	Inouye et al., Electroporation as a new technique for producing transgenic fish, <u>Cell Differ. Devel.</u> 29:123-128 (1990)
2	FJ	Inouye et al., Monitoring gene expression in Chinese hamster ovary cells using secreted

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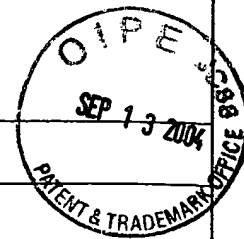
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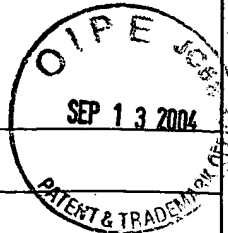
  

		apoeaquin, <i>Analyt. Biochem.</i> 201(1): 114-118 (1992)
2	FK	Inouye et al., "Imaging of luciferase secretion from transformed Chinese hamster ovary cells," <i>Proc. Natl. Acad. Sci. USA</i> 89:9584-9587 (1992)
2	FL	Inouye et al., "Expression of apoeaquin complementary DNA in <i>Escherichia coli</i> ," <i>Biochem.</i> 25:8425-8429 (1986)
2	FM	Kain et al., Green Fluorescent Protein as a reporter of Gene Expression and Protein Localization <i>BioTechniques</i> 19:650-655 (1995)
2	FN	Karp et al., Bioluminescence and Chemiluminescence. Basic Chemistry and Analytical Applications, DeLuca et al., eds., pp. 360-363, Academic Press (1981)
2	FO	Kendall et al., Changes in free calcium in the endoplasmic reticulum of living cells detected using targeted aequorin, <i>Anal. Biochem.</i> 22(1):173-81 (1994)
2	FP	Knight et al., Imaging calcium dynamics in living plants using semi-synthetic recombinant aequorins, <i>J. Cell Biol.</i> 121(1):83-90 (1993)
2	FQ	Knight et al., Transgenic plant aequorin reports the effects of touch and cold-shock and elicitors on cytoplasmic calcium, <i>Nature</i> 352(6335): 524-526 (1991)
2	FR	Leach et al., Commercially available firefly luciferase reagents, in <i>Methods in Enzymology. Bioluminescence and Chemiluminescence Part B</i> 133:51-69, Academic Press (1986)
2	FS	Legocki et al., Bioluminescence in soybean root nodules: Demonstration of a general approach to assay gene expression <i>in vivo</i> by using bacterial luciferase, <i>Proc. Natl. Acad. Sci. USA</i> 81: 9080-9084 (1986)
2	FT	McElroy, et al., The Chemistry and Applications of Firefly Luminescence, <i>Bioluminescence and Chemiluminescence</i> , 179-185, Academic Press, Inc. (1981).
2	FU	Miller et al. An improved GFP cloning cassette designed for prokaryotic transcriptional fusions <i>Gene</i> 191:149-153 (1997)
2	FV	Mitra et al., Fluorescence resonance energy transfer between blue-emitting and red-shifted excitation derivatives of the green fluorescent protein, <i>Gene</i> 73(1):13-17 (1996)
2	FW	Miyawaki et al. Fluorescent indicators for $Ca^{2+}$ based on green fluorescent proteins and calmodulin <i>Nature</i> 388:882-887 (1997)
2	FX	Morin, Energy in a Bioluminescent System, <i>J. Cell Physiol.</i> , 77:313-318 (1971)
2	FY	Nakajima-Shimada et al., Monitoring of intracellular calcium in <i>Saccharomyces cerevisiae</i> with an apoeaquin cDNA expression system, <i>Proc. Natl. Acad. Sci. USA</i> 88(15): 6878-6882 (1991)
2	FZ	Plautz et al., Green Fluorescent protein and its derivatives as versatile markers for gene expression in living <i>Drosophila melanogaster</i> , plant and mammalian cells <i>Gene</i> 173:83-87 (1996)
2	GA	Rivera et al., AquaLite® Streptavidin for supersensitive TSH assays in microtiter plates and coated tubes, <i>SeaLite Sciences Technical Report No. 6</i>
2	GB	Rizzuto et al., Rapid changes of mitochondrial $Ca^{2+}$ revealed by specifically targeted recombinant aequorin, <i>Nature</i> 358(6384): 325-327 (1992)
2	GC	Romoser et al., Detection in living cells of $Ca^{2+}$ -dependent changes in the fluorescence emission of an indicator composed of two green fluorescent protein variants linked by a calmodulin-binding sequence, <i>J. of Biolog. Chem.</i> 272(20):13270-13274 (1997)
2	GD	Rutter et al., Involvement of MAP kinase in insulin signalling revealed by non-invasive imaging of luciferase gene expression in single living cells, <i>Current Biology</i> 5(8): 890-9 (1995)
2	GE	Saran et al., Intracellular free calcium level and its response to cAMP stimulation in developing <i>Dictyostelium</i> cells transformed with jellyfish apoeaquin cDNA, <i>FEBS Lett.</i> 337(1): 43-7 (1994)
2	GF	Sedlak et al., Bioluminescent Technology for Reagents, Diagnostics and Toxicology," <i>Genetic</i>



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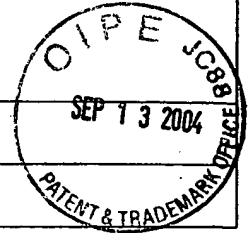
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		Engineering News, September 15, 1995	
2	GG	Sgoutas <i>et al.</i> , AquaLite® bioluminescence assay of thyrotropin in serum evaluated, <u>Clin. Chem.</u> 41(11):1637-1643 (1995)	
2	GH	Sheu <i>et al.</i> , Measurement of intracellular calcium using bioluminescent aequorin exposed in human cells, <u>Analyt. Biochem.</u> 209(2): 343-347 (1993)	
2	GI	Straight <i>et al.</i> GFP tagging of budding yeast chromosomes reveals that protein-protein interactions can mediate sister chromatid cohesion <u>Current Biology</u> 12:1599-1608 (1996)	
2	GJ	Stults <i>et al.</i> Use of Recombinant Biotinylated Apoaquorin in Microtiter and Membrane-Based Assays: Purification of Recombinant Apoaquorin from <i>Escherichia coli</i> <u>Biochemistry</u> 31:1433-1442 (1992)	
2	GK	Terry <i>et al.</i> Molecular characterisation of recombinant green fluorescent protein by fluorescence correlation microscopy <u>Biochemical and Biophysical Research Communication</u> 217:21-27 (1995)	
2	GL	Thompson <i>et al.</i> , <i>Vargula hilgendorfii</i> luciferase: a secreted reporter enzyme for monitoring gene expression in mammalian cells, <u>Gene</u> 96:257-262 (1990)	
2	GM	Travis, J. Following the Inner Light, Glow Genes provide revealing pictures of infections <u>Science News</u> 150:220-221 (1996)	
2	GN	Xu <i>et al.</i> A bioluminescence resonance energy transfer (BRET) system: Application to interacting circadian clock proteins <u>Proc. Natl. Acad. Sci. USA</u> 96:151-156 (1999)	

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3) Art that concerns items/procedures that use chemi- or bio-luminescence.

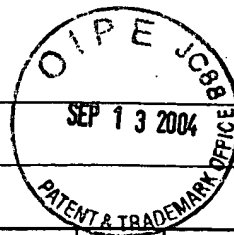
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3	GO	3	5	1	1	6	1	2	05/12/70	Kennerly et al.	23	252	03/20/67
3	GP	3	5	6	5	8	1	5	2/23/71	Christy	252	301.3	12/28/67
3	GQ	3	6	6	9	8	9	1	6/13/72	Greenwood et al.	252	90	5/27/70
3	GR	4	3	1	3	8	4	3	2/2/82	Bollyky et al.	252	188.3	9/9/76
3	GS	4	4	7	8	8	1	7	10/23/84	Campbell et la.	424	7.1	11/14/78
3	GT	4	5	3	4	3	1	7	08/13/85	Walsh	119	51 R	08/30/84
3	GU	4	7	1	4	6	8	2	12/22/87	Schwartz	436	10	04/03/87
3	GV	4	7	6	7	2	0	6	8/30/88	Schwartz	356	73	12/24/84
3	GW	4	7	7	4	1	8	9	9/27/88	Schwartz	436	10	12/11/85
3	GX	4	7	7	7	1	2	8	10/11/88	Lippa	435	5	05/27/86
3	GY	4	8	5	3	3	2	7	8/1/89	Dattagupta	435	6	7/10/85
3	GZ	4	8	6	7	9	0	8	9/19/89	Recktenwald et al.	252	408.1	6/4/87
3	HA	4	9	5	0	5	8	8	8/21/90	Dattagupta	435	6	09/27/88
3	HB	5	0	0	4	5	6	5	4/02/91	Schaap	252	700	07/27/88
3	HC	5	1	8	9	0	2	9	02/23/93	Boyer et al.	514	64	04/23/90
3	HD	5	2	7	9	9	4	3	1/18/94	Mathis et al.	435	7.32	01/19/93
3	HE	5	3	7	4	5	3	4	12/20/94	Zomer et al.	435	8	5/14/93
3	HF	5	4	2	2	0	7	5	06/06/95	Saito et al.	422	52	05/27/93
3	HG	5	4	2	4	2	1	6	6/13/95	Nagano et al.	436	116	8/16/93
3	HH	5	4	3	3	8	9	6	07/18/95	Kang et al.	252	700	05/20/94
3	HI	5	4	3	5	9	3	7	7/25/95	Bell et al.	252	301.18	02/12/93
3	HJ	5	4	3	9	7	9	7	08/08/95	Tsien et al.	435	7.21	08/30/93
3	HK	5	4	5	1	3	4	7	9/19/95	Akhavan-Tafti et al.	252	700	6/24/93
3	HL	5	4	8	4	7	2	3	01/16/96	Zenno et al.	435	189	06/28/94
3	HM	5	4	8	6	4	5	5	01/23/96	Stults	435	6	08/22/94
3	HN	5	7	1	9	0	4	4	02/17/98	Shoseyov et al.	435	69.7	02/17/98

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3	HO	0	0	2	5	3	5	0	09/05/80	EP A2			
3	HP	0	1	9	4	1	0	2	10/23/91	EP B1			
3	HQ	0	2	4	6	1	7	4	11/19/87	EP A1			X*
3	HR	0	7	1	3	0	8	9	05/22/96	EP A2			
3	HS	2	2	9	2	5	9	5	6/25/76	FR			X*
3	HT	9	2	0	1	2	2	5	01/23/92	PCT			

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3	HU	9	2	0	4	5	7	7	03/19/92	PCT			X*
3	HV	9	4	1	8	3	4	2	8/18/94	PCT			
3	HW	9	9	6	6	3	2	4	12/23/99	PCT			



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3	HX	Amato, Race quickens for non-stick blood monitoring technology, <u>Science</u> 258:892-893 (1992)											
3	HY	Apt et al., Evolution of phycobiliproteins, <u>J. Mol. Biol.</u> 248: 79-96 (1995)											
3	HZ	Baird et al., "Biochemistry, mutagenesis, and oligomerization of DsRed, a red fluorescent protein from coral", <u>PNAS</u> , 97(22):11984-11989; (2000)											
3	IA	Bondar et al., Cadmium-induced luminescence of recombinant photoprotein obelin, <u>Biochim. Biophys. Acta</u> 1231: 29-32 (1995)											
3	IB	Campbell et al., Formation of the Ca <sup>2+</sup> -activated photoprotein obelin from apo-obelin and mRNA inside human neutrophils, <u>Biochem. J.</u> 252(1):143-9 (1988)											
3	IC	Cardullo et al. Detection of nucleic acid hybridization by nonradiative fluorescence resonance energy transfer <u>Pro.Natl. Acad. Sci. USA</u> 85:8790-9794 (1988)											
3	ID	Crescitelli, Adaptations of visual pigments to the photic environment of the deep sea, <u>J. Exptl. Zool. Supp.</u> 5: 66-75 (1991)											
3	IE	Database Derwent #008987167 (citing WO 9204577, Chemiluminescence prodn. in liq.-contg. vessel - by placing reagent envelope in liq. or vessel base)											
3	IF	Fairchild et al., Oligomeric Structure, Enzyme Kinetics, and Substrate Specificity of the Phycocyanin _ Subunit Phycocyanobilin Lyase, <u>The Journal of Biological Chemistry</u> 269(12): 8686-8694 (1994).											
3	IG	Frackman et al., "Cloning, Organization, and Expression of the Bioluminescence Genes of <i>Xenorhabdus luminescens</i> ," <u>J. Bacteriol.</u> , 172(10):5767-5773; (1990)											
3	IH	Goldmacher et al., "Photoactivation of Toxin Conjugates", <u>Bioconj. Chem.</u> , 3:104-107; (1992)											
3	II	Gautier et al., Alternate determination of ATP and NADH with a single bioluminescence-based fiber-optic sensor, Fifth International Conference on Solid State Sensors and Actuators and Eurosensors III, Montreux, Switzerland, 25-30 June 1989											
3	IJ	Gilbert et al., Expression of genes involved in phycocyanin biosynthesis following recovery of <i>Synechococcus</i> PCC 6301 from nitrogen starvation, and the effect of gabaculine on <i>cpcBa</i> transcript levels, <u>FEMS Microbiol. Lett.</u> 140: 93-98 (1996)											
3	IK	Glazer, Phycobilisomes: structure and dynamics, <u>Ann. Rev. Microbiol.</u> 36: 173-98 (1982).											
3	IL	Goldstein et al., Characterization of the Cellulose-Binding Domain of the <i>Clostridium cellulovorans</i> Cellulose-Binding Protein A, <u>Journal of Bacteriology</u> 175(18): 5762-5768 (1993).											
3	IM	Hart et al., <i>Renilla reniformis</i> Bioluminescence: Luciferase-Catalyzed Production of Nonradiating Excited States from Luciferin Analogues and Elucidation of the Excited State Species Involved in Energy Transfer to <i>Renilla</i> Green Fluorescent Protein, <u>Biochemistry</u> 18(11):2204-2210 (1979).											
3	IN	Houmard et al., Genes encoding core components of the phycobilisome in cyanobacterium <i>Calothrix</i> sp. strain PCC 7601: occurrence of a multigene family, <u>J. Bacteriol.</u> 170(12): 5512-5521 (1988)											
3	IO	Illarionov et al., "Sequence of the cDNA encoding the Ca <sup>2+</sup> -activated photoprotein obelin from the hydroid polyp <i>Obelia longissima</i> ", <u>Gene</u> , 153:273-274; (1995)											
3	IP	Johnson, F.H., Luminescence, Narcosis, and Life in the Deep Sea, <u>Vantage Press, NY</u> pp. 50-56 (1988)											
3	IQ	Kronick, The use of phycobiliproteins as fluorescent labels in immunoassay, <u>J. Immunolog. Meth.</u> 92: 1-13 (1986)											
3	IR	Liu et al., A cyanidium caldarium Allophycocyanin _ subunit gene, <u>Plant Physiol.</u> 103:293-294											

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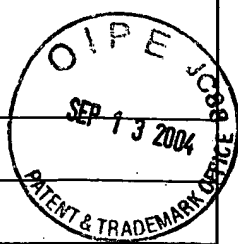
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		(1993)
3	IS	Lucas et al., Coelenterazine is a superoxide anion-sensitive chemiluminescent probe: its usefulness in the assay of respiratory burst in neutrophils, <u>Analyt. Biochem.</u> 206(2):273-277 (1992)
3	IT	Morin et al., "Energy Transfer in _ Bioluminescent System", <u>J. Cell Physiol.</u> , 77:313-318; (1971)
3	IU	Müller and Campbell, "The chromophore of pholasin: A highly luminescent protein", <u>J. Biolumin. Chemilum.</u> 5:25-30 (1990)
3	IV	Nicoli et al., Bacterial luciferase: The hydrophobic environment of the reactive sulfhydryl, <u>J. Biol. Chem.</u> 249: 2393-2396 (1974)
3	IW	O'Day et al., <i>Aristostomias scintillans</i> (Malacostiedae): a deep sea fish with visual pigments apparently adapted to its own bioluminescence, <u>Vision Res.</u> 14:545-550 (1974)
3	IX	Peerce et al. Distance between substrate sites on the Na-glucose cotransporter by fluorescence energy transfer <u>Proc. Natl. Acad. Sci. USA</u> 83:8092-8096 (1986)
3	IY	Pilot et al., Cloning and sequencing of the genes encoding the _ and _ subunits of C-phycocyanin from the cyanobacterium <i>Agmenellum quadruplicatum</i> , <u>Proc. Natl. Acad. Sci. USA</u> 81: 6983-6987 (1984)
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3	JB	Shimomura et al., Regeneration of the photoprotein aequorin, <u>Nature</u> 256: 236-238 (1975)
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3	JE	Shimomura, "Cause of spectral variation in the luminescence of semisynthetic aequorins", <u>Biochem J.</u> 306:537-543 (1995)
3	JF	Shimomura et al., Peroxidized coelenterazine, the active group in the photoprotein aequorin, <u>Proc. Natl. Acad. Sci. USA</u> 75(6): 2611-5 (1978)
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3	JH	Smith et al., Bioluminescent immunoassays using streptavidin and biotin conjugates of recombinant aequorin, reprinted from <u>American Biotechnology Laboratory</u> , April 1995
3	JI	Stability of AquaLite®: lyophilized and in solution, <u>SeaLite Sciences Technical Report No. 8</u> (1994)
3	JJ	Stephenson et al. Studies on the Luminescent Response of the Ca <sup>2+</sup> -Activated Photoprotein, <u>Obelin Biochimica et Biophysica Acta</u> 678:65-75 (1981)
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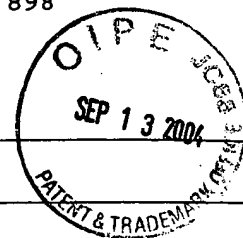
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3	JP	Ward, Properties of the Coelenterate Green-Fluorescent Proteins <u>Bioluminescence and Chemiluminescence</u> 235-242 (1981)	
3	JQ	Ward, General Aspects of Bioluminescence, in <u>Chemi- and Bioluminescence</u> , Ch. 7, Burr, ed., Marcel Dekker, Inc., New York	
3	JR	Ward et al. Energy Transfer Via Protein-Protein Interaction in Renilla Bioluminescence <u>Photochemistry and Photobiology</u> 27:389-396 (1978)	
3	JS	Ward, Energy Transfer Processes in Bioluminescence <u>Photochem. Photobiol. Rev.</u> 4:1-57	
3	JT	Ward et al., An energy transfer protein in coelenterate bioluminescence, <u>J. Biol. Chem.</u> 254: 781-788 (1979)	
3	JU	Ward et al. In Vitro Energy Transfer in Renilla Bioluminescence <u>The Journal of Physical Chemistry</u> 8:2289-2291 (1976)	
3	JV	Watanabe et al., Bunding of murine monoclonal antibodies to the active and inactive configurations of aequorin, <u>FEBS Lett.</u> 246(1-2): 73-77 (1989)	
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3	JX	Welches et al., Active center studies on bacterial luciferase: Modification of the enzyme with 2,4-dinitrofluorobenzene, <u>Biochemistry</u> 20: 512-517 (1981)	
3	JY	Widder et al., "Far red bioluminescence from two deep-sea fishes", <u>Science</u> 225:512-514 (1984)	
3	JZ	Wienhausen et al., Luciferases from different species of fireflies are antigenically similar, <u>Photochem. Photobiol.</u> 42: 609-611 (1985)	
3	KA	Yarbrough et al., "Refined crystal structure of DsRed, a red fluorescent protein from coral, at 2.0-Å resolution", <u>PNAS</u> , 98(2):462-467; (2001)	
3	KB	Yen et al., "Synthesis of water-soluble copolymers containing photocleavable bonds", <u>Makromol. Chem.</u> , 190:69-82; (1989)	
3	KC	Ziegler et al., Active center studies on bacterial luciferase: Locations of the protease labile regions and the reactive cysteinyl residue in the primary structure of the _ subunit, <u>Bioluminescence and Chemiluminescence. Basic Chemistry and Analytical Applications</u> , DeLuca et al., eds., pp. 376-377, Academic Press (1981)	

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4) Art that concerns novelty items which use chemi- or bioluminescence.

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EXAMINER INITIAL		DOCUMENT NUMBER							DATE	NAME	CLAS S	SUB CLAS S	FILING DATE
4	KD	3	5	8	4	2	1	1	6/8/71	Rauhut	240	2.25	10/7/68
4	KE	3	6	3	4	2	8	0	1/11/72	Dean et al.	252	301.3 R	12/31/68
4	KF	3	6	6	1	7	9	0	5/9/72	Dean et al.	252	301.3 R	1/31/68
4	KG	4	5	6	3	7	2	6	1/7/86	Newcomb et al.	362	34	8/20/84
4	KH	4	7	1	7	1	5	8	1/5/88	Pennisi	273	58A	6/26/86
4	KI	4	7	8	1	6	4	7	11/1/88	Doane, Jr.	446	219	5/4/87
4	KJ	4	9	2	4	3	5	8	5/8/90	Von Heck	362	32	9/12/88
4	KK	4	9	6	3	1	1	7	10/16/90	Gualdoni	446	219	10/30/89
4	KL	5	1	5	8	3	4	9	10/27/92	Holland et al.	362	34	07/03/91
4	KM	5	1	7	1	0	8	1	12/15/92	Pita et al.	362	34	5/29/92
4	KN	5	2	2	2	7	9	7	6/29/93	Holland	362	34	10/31/91
4	KO	5	3	2	3	4	9	2	6/28/94	DeMars	2	203.13	11/6/92
4	KP	5	3	8	3	1	0	0	01/17/95	Kikos	362	34	08/02/91
4	KQ	5	4	1	3	3	3	2	5/09/95	Montgomery	273	58	05/26/94
4	KR	5	4	1	5	1	5	1	5/16/95	Fusi et al.	124	56	9/20/93
4	KS	5	6	7	1	9	9	8	09/30/97	Collet	362	101	08/30/91
4	KT	5	7	3	0	3	2	1	03/24/98	McAllister et al.	222	1	12/13/95
4	KU	5	8	7	6	9	9	5	3/2/99	Bryan	435	189	11/25/96
4	KV	6	1	1	3	8	8	6	09/05/00	Bryan	424	49	11/22/99
4	KW	6	1	5	2	3	5	8	11/28/00	Bryan	229	87.19	08/17/98

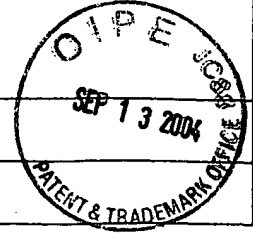
  

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5) Art that concerns items/procedures that do not use chemi- or bioluminescence

U.S. PATENT DOCUMENTS													
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5	KY	2	5	4	1	8	5	1	2/13/51	Wright	260	37	12/23/44
5	KZ	3	6	4	9	0	2	9	03/14/72	Worrell	273	186	07/09/69
5	LA	3	7	2	7	2	3	6	04/17/73	Lloyd et al.	2	51	06/15/71
5	LB	3	3	8	4	4	9	8	5/21/68	Ahrabi	106	38.5	1/4/67
5	LC	3	8	7	3	4	8	5	3/25/75	Fichera	260	29.2	4/3/74
5	LD	4	0	2	1	3	6	4	5/03/77	Speiser	252	316	12/04/73
5	LE	4	0	4	4	1	2	6	08/23/77	Cook et al.	424	243	07/09/76
5	LF	4	1	7	5	1	8	3	11/20/79	Ayers	536	57	05/24/78
5	LG	4	1	7	7	0	3	8	12/04/79	Biebricher et al.	8	192	05/17/77
5	LH	4	2	2	5	5	8	1	9/30/80	Kreuter et al.	424	88	8/07/78
5	LI	4	2	2	9	7	9	0	11/21/80	Gilliland et al.	364	200	10/16/78
5	LJ	4	2	6	9	8	2	1	5/26/81	Kreuter	424	19	05/02/80
5	LK	4	2	8	1	6	4	5	08/04/81	Jöbsis	128	633	06/28/77
5	LM	4	2	8	2	2	8	7	8/4/81	Giese	428	407	01/24/80
5	LN	4	3	2	4	6	8	3	4/13/82	Lim et al.	252	316	08/20/75
5	LO	4	3	6	4	9	2	3	12/21/82	Cook et al.	424	46	04/30/81
5	LP	4	4	1	4	2	0	9	11/08/83	Cook et al.	424	243	06/13/77
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5	LR	4	5	4	2	1	0	2	9/17/85	Dattagupta et al.	435	6	07/05/83
5	LS	4	5	6	2	1	5	7	12/31/85	Lowe et al.	435	291	05/25/84
5	LT	4	6	7	6	4	0	6	6/30/87	Frischmann et al.	222	136	9/29/86
5	LU	4	6	8	1	8	7	0	7/21/87	Balint et al.	502	403	01/11/85
5	LV	4	7	3	5	6	6	0	4/5/88	Cane	106	203	6/26/87
5	LW	4	7	4	5	0	5	1	05/17/88	Smith et al.	435	68	05/27/83
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5	LY	4	7	6	5	5	1	0	8/23/88	Rende	222	79	4/7/87
5	LZ	4	7	8	9	6	3	3	12/06/88	Huang	435	240.2	04/19/84
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5	MC	4	8	9	1	0	4	3	1/02/90	Zeimer et al.	604	20	05/28/87
5	MD	4	9	0	8	4	0	5	3/13/90	Bayer et al.	525	61	01/02/86
5	ME	4	9	2	1	7	5	7	5/01/90	Wheatley et al.	428	402.2	09/03/87
5	MF	4	9	2	7	9	2	3	05/22/90	Mathis et al.	540	456	09/20/85
5	MG	4	9	5	2	4	9	6	08/28/90	Studier et al.	435	91	12/29/86
5	MH	5	0	2	3	1	8	1	6/11/91	Inouye	435	189	7/13/88
5	MI	5	0	9	6	8	0	7	3/17/92	Leaback	435	6	3/17/92
5	MJ	5	1	2	8	2	5	6	07/07/92	Huse et al.	435	172.3	04/20/89
5	MK	5	1	6	2	5	0	8	11/10/92	Lehn et al.	401	04	06/26/91

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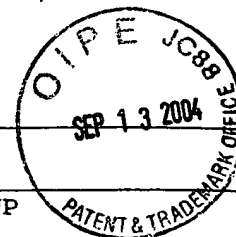
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5	MO	5	2	4	3	0	4	1	09/07/93	Fernandez-Pol	536	23.5	08/22/91
5	MP	5	2	6	6	3	1	7	11/30/93	Tomalski et al.	424	93 T	10/04/90
5	MQ	5	2	6	8	4	6	3	12/7/93	Jefferson	536	23.7	12/8/89
5	MR	5	2	7	7	9	1	3	1/11/94	Thompson et al.	424	450	09/09/91
5	MS	5	2	8	8	6	2	3	02/22/94	Zenno et al.	435	69.7	07/13/92
5	MT	5	3	1	0	4	2	1	5/10/94	Shapero et al.	106	208	2/7/92
5	MU	5	3	3	7	7	4	5	08/16/94	Benaron	128	633	11/12/93
5	MV	5	3	6	0	7	2	6	11/01/94	Raikhel	435	172.3	11/12/91
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5	NB	5	4	0	5	9	5	8	4/11/95	VanGermert	544	71	12/21/92
5	NC	5	4	1	2	0	8	5	5/2/95	Allen et al.	536	24.1	11/09/93
5	ND	5	4	1	3	0	9	8	05/09/95	Benaron	128	633	12/22/92
5	NE	5	4	3	2	0	8	1	7/11/95	Jefferson	435	252.3	11/15/93
5	NF	5	4	5	5	3	5	7	10/03/95	Herrmann et al.	548	147	
5	NG	5	4	6	4	7	5	8	11/7/95	Gossen et al.	435	69.1	6/14/93
5	NH	5	4	9	6	9	3	4	03/05/96	Shoseyov et al.	536	23.7	04/14/93
5	NI	5	6	0	5	6	6	2	02/25/97	Heller et al.	422	68.1	11/01/93
5	NJ	5	6	2	4	7	1	1	04/29/97	Sundberg et al.	427	261	04/27/95
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5	NN	6	0	2	0	5	3	8	02/01/00	Han et al.	800	293	05/01/98
5	NO	6	2	3	2	1	0	7	05/15/01	Bryan et al.	435	189	03/26/99

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5	NQ	8	6	0	3	8	4	0	07/03/86	PCT				
5	NR	9	3	1	3	3	9	5	07/08/93	PCT				
5	NS	9	4	2	5	8	5	5	11/10/94	PCT				
5	NT	9	6	0	7	9	1	7	03/14/96	PCT				

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OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)		
5	NU	Altschul et al., "Basic Local Alignment Search Tool", <i>J. Mol. Biol.</i> , 215:403-410; (1990)
5	NV	Anderson, <i>Radiolaria</i> , Springer-Verlag, New York (1983)
5	NW	Aviv et al., Purification of Biologically Active Globin Messenger RNA by Chromatography on Oligothymidylic acid-Cellulose, <i>Proc. Natl. Acad. Sci. USA</i> 69(6):1408-1412 (1972).
5	NX	Batra et al., "Insertion of Constant Region Domains of Human IgG, into CD4-PE40 Increases Its Plasma Half-life", <i>Molecular Immunol.</i> , 30(4):379-386; (1993)
5	NY	Bayer and Wichek (1980) The Use of Avidin/Biotin Complex as a Tool in Molecular Biology. <i>Meth. Biochem. Anal.</i> 26, 1-45
5	NZ	Berg et al., Long-chain polystyrene-grafted polyethylene film matrix: a new support for solid-phase peptide synthesis, <i>J. Am. Chem. Soc.</i> 111: 8026-8027 (1989)
5	OA	Berg et al., Peptide synthesis on polystyrene-grafted polyethylene sheets, <i>Pept., Proc. Eur. Pept. Symp.</i> , 20th, Jung et al. (Eds.), pp. 196-198 (1989)
5	OB	Berg et al., Polystyrene-grafted polyethylene: Design of film and felt matrices for solid-phase peptide synthesis, <i>Innovation Perspect. Solid Phase Synth. Collect. Pap., Int. Symp.</i> , 1st, Epton (ed.), pp. 453-459 (1990)
5	OC	Biocomputing: <i>Informatics and Genome Projects</i> , Book: Smith, D.W., Ed., Academic Press, New York; (1993)
5	OD	Bodanszky and Bodanszky, <i>The Practice of Peptide Synthesis</i> , Springer-Verlag, New York, (1984)
5	OE	Bunnin et al. The combinatorial synthesis and chemical and biological evaluation of a 1,4-benzodiazepine library, <i>Proc. Natl. Acad. Sci. USA</i> , 91:4708-4712 (1994)
5	OF	Carlsson et al. Protein Thiolation and Reversible Protein-Protein Conjugation <i>Biochem. J.</i> 173: 723-737 (1978)
5	OG	Carrillo et al., "The Multiple Sequence Alignment Problem in Biology", <i>SIAM J. Applied Math.</i> , 48(5):1073-1082; (1988)
5	OH	Childress, "Oxygen minimum layer: Vertical distribution and respiration of the mysid gnathophausia ingens", <i>Science</i> 160:1242-1243 (1968)
5	OI	Chirgwin et al., Isolation of Biologically Active Ribonucleic Acid from Sources Enriched in Ribonuclease, <i>Biochemistry</i> 18(24):5294-5299 (1979).
5	OJ	<i>Computational Molecular Biology</i> , Book: Lesk, A.M., ed., Oxford University Press, New York; (1988)
5	OK	<i>Computer Analysis of Sequence Data</i> , Book: Part I, Griffin, A.M., and Griffin, H.G., eds., Humana Press, New Jersey; (1994)
5	OL	Cumber et al., "Structural Features of the Antibody-A Chain Linkage that Influence the Activity and Stability of Ricin A Chain Immunotoxins", 3(5):397-401; (1992)
5	OM	Devereux et al., "A comprehensive set of sequence analysis programs for the VAX", <i>Nucl. Acids Res.</i> , 12(1):387-395; (1984)
5	ON	DeWitt et al., Diversomers: an approach to nonpeptide, nonoligomeric chemical diversity, <i>Proc. Natl. Acad. Sci. USA</i> 90: 6909-6913 (1993)
5	OO	DeWitt et al., DIVERSOMER™ Technology: solid phase synthesis, automation, and integration for the generation of chemical diversity, <i>Drug Dev Res</i> 33:116-124 (1994).
5	OP	DIALOG Abstract 002042687, citing: JP 7241192
5	OQ	Düzgunes et al., Fusion of phospholipid vesicles induced by divalent cations and protons; modulation by phase transitions, free fatty acids, monovalent cations, and polyamines, <i>Cell Fusion</i> , Ch. 11 Divalent Cations and Protons, Sowers, A.E. (ed.) pp. 241-267 (1984).
5	OR	Fattom et al., "Comprehensive Immunogenicity of Conjugates Composed of the

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LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT			
		APPLICANT BRYAN et al.	
		FILING DATE March 15, 2001	GROUP 1642

		<i>Staphylococcus aureus</i> Type 8 Capsular Polysaccharide Bound to Carrier Proteins by Adipic Acid Dihydrazide or <i>N</i> -Succinimidyl-3-(2-Pyridyldithio)propionate", <i>Infection &amp; Immun.</i> , 60(2):584-589; (1992)
5	OS	Goodchild, "Conjugates of oligonucleotides and modified oligonucleotides: A review of their synthesis and properties", <i>Perspectives in Bioconjugate Chemistry</i> , Mears, ed., American Chemical Society, Washington, D.C., Ch 6, pp. 77-99 (1993)
5	OT	Gordon et al. Topographical localization of the C-terminal region of the voltage-dependent sodium channel from <i>Electrophorus electricus</i> using antibodies raised against a synthetic peptide <i>Proc. Natl. Acad. Sci.</i> 84:308-312 (1987)
5	OU	Gribskov et al., "Sigma factors from <i>E. coli</i> , <i>B. subtilis</i> , phage SP01, and phage T4 are homologous proteins", <i>Nucl. Acids Res.</i> , 14(16):6745-6762; (1986)
5	OV	Guide to Human Genome Computing, Book: Martin J. Bishop, ed., Academic Press, San Diego; (1994)
5	OW	Guyomard et al., Integration and germ line transmission of foreign genes microinjected into fertilized trout eggs, <i>Biochimie</i> 71:857-863 (1989)
5	OX	Hazum et al., A photocleavable protecting group for the thiol function of cysteine, <i>Pept., Proc. Eur. Pept. Symp.</i> , 16th, Brunfeldt, K (Ed), pp. 105-110 (1981)
5	OY	Hermanson et al., <i>Immobilized Affinity Ligand Techniques</i> , Chaps. 1 and 2, Academic Press, Inc. (1992)
5	OZ	<i>Immobilized Biochemicals and Affinity Chromatography</i> , Advances in Experimental Medicine and Biology, vol. 42, ed. R. Dunlap, Plenum Press, N.Y. (1974) Table of Contents
5	PA	<i>Immobilized Enzyme, Antigens, Antibodies and Peptides. Preparation and Characterization</i> , Marcel Dekker, Inc., N.Y., Howard H. Weetall (ed.) (1975)
5	PB	Jellinek et al., "Potent 2'-Amino-2'-deoxypyrimidine RNA Inhibitors of Basic Fibroblast Growth Factor", <i>Biochem.</i> , 34:11363-11372; (1995)
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5	PD	Kent et al., Preparation and properties of tert-butyloxycarbonylaminocayl-4-(oxymethyl) phenylacetamidomethyl-(Kel F-g-styrene) resin, an insoluble, noncrosslinked support for solid phase peptide synthesis, <i>Israel J. Chem.</i> 17: 243-247 (1978)
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5	PF	Kröger et al., "A new calcium binding glycoprotein family constitutes a major diatom cell wall component", <i>EMBO</i> 13:4676-4683 (1996)
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5	PH	Lin et al., "Modified RNA sequence pools for <i>in vitro</i> selection", <i>Nucl. Acids Res.</i> , 22(24):5229-5234; (1994)
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5	PJ	Mahan et al., "Phase Change Enzyme Immunoassay", <i>Anal. Biochem.</i> , 162:163-170; (1987)
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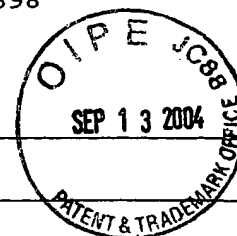
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5	PO	Mosbach et al. Immobilization of enzymes to various acrylic copolymers. <u>Methods in Enzymology</u> 44:53-65 (1976)
5	PP	Mosbach et al. Immobilized coenzymes. <u>Methods in Enzymology</u> 44:859-887 (1976)
5	PQ	Mosbach, K and Mattiasson, B. Multistep enzyme systems. <u>Methods in Enzymology</u> 44:453-478 (1976)
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5	PS	Nakamura et al., DNA Sequence of the Gene for the Outer Membrane Lipoprotein of E. coli: an Extremely AT-Rich Promoter, <u>Cell</u> 18:1109-1117 (1979).
5	PT	Needleman et al., "A General Method Applicable to the Search for Similarities in the Amino Acid Sequence of Two Proteins", <u>J. Mol. Biol.</u> , 48:443-453; (1970)
5	PU	Nogrady, Medicinal Chemistry, A Biochemical Approach, <u>Oxford University Press</u> , New York pp. 388-392.
5	PV	Ozato et al., Production of transgenic fish: introduction and expression of chicken - crystalline gene in medaka embryos, <u>Cell Differ. Devel.</u> 19:237-244 (1986)
5	PW	Pagratitis et al., "Potent 2'-amino-, and 2'-fluoro-2'-deoxyribonucleotide RNA inhibitors of keratinocyte growth factor", <u>Nature Biotechnol.</u> , 15:68-73; (1997)
5	PX	Pearson et al., "Improved tools for biological sequence comparison", <u>Proc. Natl. Acad. Sci. U.S.A.</u> , 85:2444-2448; (1988)
5	PY	Peffer et al., "Strand-invasion of duplex DNA by peptide nucleic acid oligomers", <u>Proc. Natl. Acad. Sci. U.S.A.</u> 90:10648-10652 (1993)
5	PZ	Pierce Catalog, pp. T123-T154, 1994
5	QA	PIERCE Catalog & Handbook, pp. O90-O110, T155-T200 (1994)
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5	QC	Sambrook et al., Molecular Cloning, 2nd ed., Cold Springs Harbor Laboratory press, New York (1989).
5	QD	Sanger et al., DNA sequencing with chain-terminating inhibitors, <u>Proc. Natl. Acad. Sci. USA</u> 74(12):5463-5467 (1977).
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5	QH	Smith et al., "Comparison of Biosequences", <u>Adv. Appl. Math.</u> , 2:482-489; (1981)
5	QI	Stewart and Young, Laboratory techniques in solid phase peptide synthesis, <u>Solid Phase Peptide Synthesis</u> , 2d Ed., Pierce Chemical Co., pp. 53-73 (1984)
5	QJ	Studier et al. Use of T7 RNA Polymerase to Direct Expression of Cloned Genes <u>Methods in Enzymology</u> 185: 60-89 (1990)
5	QK	Thorpe et al., "New Coupling Agents for the Synthesis of Immunotoxins Containing a Hindered Disulfide Bond with Improved Stability in Vivo", <u>Cancer Res.</u> , 47:5924-5931; (1987)
5	QL	Tomme et al., Cellulose-Binding Domains: Classification and Properties, <u>American Chemical Society</u> pp.142-163 (1995).
5	QM	Travis, J., X-rays speed healing of rat spinal cords, <u>Science News</u> 150:214, (1996)
5	QN	Urlaub et al., Effect of Gamma Rays at the Dihydrofolate Reductase Locus: Deletions and Inversions, <u>Somatic Cell and Molecular Genetics</u> 12(6):555-566 (1986).
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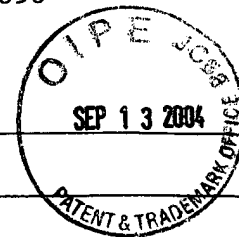
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5	QQ	Wawrzynczak et al., "Molecular and biological properties of an abrin A chain immunotoxin designed for therapy of human small cell lung cancer", <i>Br. J. Cancer</i> , 66:361-366; (1992)	
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Title: RENILLA RENIFORMIS FLUORESCENT PROTEINS, NUCLEIC ACIDS ENCODING THE FLUORESCENT PROTEINS AND THE USE THEREOF IN DIAGNOSTICS, HIGH THROUGHPUT SCREENING AND NOVELTY ITEMS

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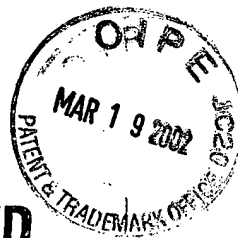
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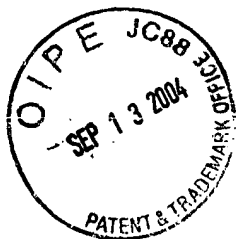


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